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10/599,026	05/31/2007	Torsten Gottschalk-Gaudig	WAS0809PUSA	3212

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

CONTINUATION SHEET

Continuation of 5. Applicant's reply has overcom e the following rejection(s):

1. Anticipation (102)(e)) / obvious (103)(a)) rejection over Gottschalk-Gaudig et al, US 7,541,405 B2; and the Anticipation (102)(e)) / obvious (103)(a)) rejection over Wacker Chem GmbH, EP 1 526 153 A1, as evidenced by Gottschalk-Gaudig et al, US 7,541,405 B2.

Continuation of 11. does NOT place the application in condition for allowance because:

1. Reasons of record.

2. Applicants provide a partial copy of a Wacker Silicones Product Overview HDK® - Pyrogenic Silica. The Brochure does not provide a publication date and appears to be an incomplete copy, including the title page and pages 5, 6, and 7. At least the hydrophilic grades of silica and silica product applications are absent from the brochure.

3. Applicants' should provide a copy of the translation with the first page of the ribboned copy of the priority document to complete the translation of the document and the Patent file. It is noted that the translation filed on 2 August 2010 was not filed with a cover sheet, has no markings corresponding to the priority document, does not contain the translated first page of the ribboned copy of the priority document, and is not listed on a transmittal sheet for the 2 August 2010 filings.

Response to Arguments

4. Applicant's arguments filed 28 January 2011 have been fully considered but they are not persuasive.

5. Applicants (page 6, response filed 28 Jan. 2011) assert:

(i) the surface energy gamma of the particles (30 to 80 mJ/m^2), and

(III) the form factor of the particles (η = 2.5 to 10) are not disclosed in Barthel, 2003/0175317 (Barthel et al (I)). Applicants further assert said properties (i) and (III) are not inherent thereto. Applicants cite *Trintec Corp. v. TOP-U.S.A. Corp.*, 63 USPQ2d 1597 (Fed. Cir. 2002), in support thereof. Said citation is noted.

Applicants (page 6, response filed 28 Jan. 2011) further assert:

(iii) the claimed relative viscosity ((η_r = 1 to 10^6), and

(iv) stability limitations ("substantially stable to coalescence and creaming) are not disclosed in Barthel et al (I) nor are they inherent.

Applicants point out that the hydrophobic, HDK® 30, silica employed in Barthel is hydrophobic and not dispersible in water as characterized in the copy of a Wacker Silicones Product Overview HDK® - Pyrogenic Silica.

As disclosed in the HDK® Brochure (page 5), the hydrophobic HDK® is produced by chemically reacting hydrophilic HDK® with methylchlorosilanes or hexamethyldisilazane.

Applicants' arguments are not deemed persuasive. The attached journal article is cited as rebuttal evidence of applicants' arguments regarding (i), (III), (iii), and (iv).

(i) Initially, Barthel et al (I) ([0052], [0054], [0069] and [0070]) discloses the surface energy as determined by the Zisman plot in Fig. 6 of about 46 mN/M = m/m • mN/m = mJ/m^2. Barthel et al (I), Fig. 6, corresponds identically to the instant Fig. 6. Barthel et al (I) ([0054]) disclose suitable surface energy are those that are not completely water wet, *i.e.*, those less than 72.5 mJ/m^2, which would include those

exemplified in Barthel et al (I). Clearly, Barthel et al (I) envisages or at least teaches the materials having surface energy values within the claimed range of 30 to 80 $mJ/m^{2.}$.

(III) Applicants do not disclose specific determination of the form factor, wherein for emulsions having ~ 20 Vol % dispersed phase provides for a relative viscosity within the range of ~ 2 to ~ 8.5. These values are consistent with those for related compositions disclosed in Barthel (III) (pages 219 and 221), herein as follows.

(i) and (iii) H. Barthel, "Surface interactions of dimethylsiloxy group-modified fumed silica", Colloids and Surfaces A: Physicochemical and Engineering Aspects 101 (1995) 217-226, (page 218, Experimental) discloses partially hydrophobic silica formed by reacting HDK® N20 (silanol density of 1.9 SiOH / nm^2) with dimethyldichlorosilanes or hexamethyldisilazane (hereafter Barthel (III). The relative silanol content is the silylated silanol content / hydrophilic silanol content. The silicas are characterized as dimethylsiloxy-modified and trimethylsiloxy-modified silica having relative silanol content of ~ 0.2 to 1.0, wherein 0.2 is characterized as hydrophobic and 1.0 is characterized as hydrophilic.

Barthel (III) (pages 219 and 221) characterizes the surface energies (Fig. 1, page 219), particle interactions (Table 1, page 221) and the relative viscosity in silicone fluid or aqueous fluid (Fig. 2 and 3, page 221 and 222) for various partially silylated silica having varying relative silanol content. The values for silylated silica having about 50 % (0.5 = 0.95 SiOH / nm^2) are as follows:

Silica	Surface Energy (mJ/m^2)	Relative viscosity in Silicone fluid ($\eta_r = \eta / \eta_0$)	Relative viscosity in glycerine/2 propanol/H_2O ($\eta_r = \eta / \eta_0$)

Dimethylsiloxy -modified	42	1.7	12
Trimethylsiloxy -modified	46	3.2	15

The surface energy values are clearly within those claimed. The relative viscosity for the Barthel (III) tested fluids, while not directed to emulsions, is clear evidence that the related emulsion fluids employing the Barthel (III) fluids as the homogeneous phase (*i.e.*, continuous phase), would be expected to have similar values. The claims read on said relative viscosities for the Barthel (III) fluids and would be expected to read on the relative viscosities for the related emulsion fluids employing the Barthel (III) fluids as the homogeneous phase (*i.e.*, continuous phase).

(iv) Barthel et al (I) characterizes the emulsions as stable throughout their disclosure and ([0148], [0154], [0160], [0166], and [0172]) characterizes the multiple emulsions as stable for over 15 months against shearing and does not exhibit coalescence or sedimentation. Furthermore, Applicants define (page 23, lines 3-12) the stability limitations “substantially stable” to include “less than 10 total volume % phase depleted (*i.e.*, separated phase).

6. Applicants assert the claimed invention must be prepared by the process of the instant invention. The Dr. Gottshalk-Gaudig Declaration has not been deemed probative. For analysis of declaration evidence, attention is directed to MPEP 716. Initially, Barthel et al (I) ([0110]) discloses the addition of the particles to either phase but they are dispersed more effectively in the phase they are wetted.

Applicants comparison in the Declaration is not a proper comparison since water wettable particulates (71 % residual SiOH, attention directed to Fig. 2 and 3 of Barthel (III), article), when following the Barthel et al (I) ([0110] and step I of example 3) teaching should be added to the aqueous phase. Furthermore, the examples of Barthel et al (I) employ 20 Vol % dispersed phase rather than the 50 vol % comparison. Does not follow the teaching of the prior art in the comparison and does not explain said differences. Attention is directed to MPEP 716.

Applicants' Declarations further do not compare the closest prior art (see Barthel et al (I) step I of examples 1 and 3).

Applicants' Declarations further is not commensurate in scope with the claims since both the prior art and the claims also include water-in-oil emulsions as well as oil-in-water emulsions.

7. Applicants' (page 7) arguments regarding the method the claimed compositions are made is unpersuasive. Attention is directed to MPEP 2113, wherein the process steps are given weight only to the extent they impart limitation to the composition. Applicants have the burden of coming forward with objective evidence. Applicants have not met their burden. Attention is directed to the above remarks regarding the Declaration.

8. Applicants (pages 7 and 8) assert Binks (I) employs hydrophobic and hydrophilic silicas, Binks (I) does not disclose each of the claim elements, and it is non-enabling for emulsions stable to creaming. These have not been deemed persuasive and were addressed in part in the Final Action. The claims do not exclude further ingredients.

Binks (I) employs the HDK® H30 silica employed in the Barthel et al (I) reference and these issues have been addressed in the Final Action and herein above. Lastly, applicants contemplate up to 10 vol % separation as their stability limitation, which the reference discloses completely emulsified systems.

9. Applicants (pages 8 and 9) arguments regarding Barthel et al (II) mirror and are substantially the same as those presented regarding Barthel et al (I). Barthel et al (II) discloses several of the same materials employed in Barthel et al (I). These have not been deemed persuasive and were addressed in part in the Final Action and herein above.

10. Applicants (page 9) assert Binks (I) in view of Binks (II) does not employ the methods of applicants. Said issue has not been deemed persuasive and was addressed in part in the Final Action and herein above.

11. The rejections and Finality is deemed proper and has been maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David W. Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daniel S. Metzmaier/
Primary Examiner, Art Unit 1762

DSM